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09/583,133	05/30/2000	Lane W. Lee	M-8377 US	1855

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EXAMINER

WASSUM, LUKE S

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Technology Center 2100

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/583,133
Filing Date: May 30, 2000
Appellant(s): LEE ET AL.

Jonathan W. Hallman
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 14 February 2005.

me

(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

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(7) *Grouping of Claims*

The rejection of claims 2-9, 20 and 24-26 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

(8) *Claims Appealed*

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) *Prior Art of Record*

4,827,462	FLANAGAN et al.	05-1989
5,630,115	MIKAMO	05-1997

(10) *Grounds of Rejection*

The following ground(s) of rejection are applicable to the appealed claims:

Claims 2-9, 20 and 24-26 are rejected under 35 U.S.C. 103(a). This rejection is set forth in a prior Office Action, mailed on 13 September 2004.

The rejection of exemplary claim 2 is as follows (taken from Final Rejection of record):

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Regarding claim 2, **Flannagan et al.** teaches a method for emulating an erasable storage medium using a non-erasable optical disk wherein the optical disk includes a writing area formed by a spiral track substantially as claimed, the method comprising:

- a) writing a plurality of data files in the writing area, wherein a first data file is written from a first end of the spiral track, a second data file is written from the end of the first data file on the spiral track, and so on for remaining files (see col. 3, lines 46-52; see also col. 5, lines 53-63);
- b) generating a system sector for the data files, wherein the system sector identifies for each data file its location on the writable area and its size (see col. 7, lines 50-62; see also col. 11, line 49 through col. 12, line 62, and particularly col. 12, lines 27-35); and
- c) writing a system sector in the writable area wherein the system sector is written from the remaining end of the spiral track (see col. 5, lines 59-63, said directory being analogous to the claimed system sector).

Flannagan et al. additionally teaches that any additional system sectors are written from the end of the system of the sector on the spiral track (see col. 5, lines 59-63, said directory being analogous to the claimed system sector).

Flannagan et al. does not explicitly teach a method including the claimed provisions for handling changes to the data files stored on the writable area.

Mikamo, however, teaches a method including the claimed provisions for handing changes to the data files stored on the writable area, including:

a) generating an updated system sector whenever there is a change in the data files stored on the writable area, wherein the updated system sector identifies only the changed data files, the unchanged data files being identified by the system sector (see diagrams of updated system sectors in Figures 3B, 6B and 11B; see also disclosure of the creation of new records OL1.REC1...OL1.RECn at col. 3, lines 6-25, and particularly lines 14-16); and

b) writing the updated system sector in the writable area (see col. 4, lines 31-47).

It would have been obvious to one of ordinary skill in the art at the time of the invention to handle changes made to the data files stored on the writable area of a WORM as claimed, since this technique would record only the portion of the new file information that differed from the corresponding portion of the old file, and also only add system sectors for those files that have changed, thus the data record region of the record medium can be utilized optimally (see col. 1, lines 63 through col. 2, line 7).

(11) Response to Argument

The Appellants argue that "**Mikamo** is fundamentally opposed to the teachings of both the present application and the **Flanagan** reference: **Mikamo** does not practice the separation of data files from the corresponding system sector information (a "system sector" as set forth in claim 2 must identify both the size and the location of the corresponding file system object).", and for this reason there would be no motivation to combine the references of record (see page 6 of Appellant's Appeal Brief).

In response, the examiner presents the following arguments.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP § 2143 - § 2143.03 for decisions pertinent to each of these criteria.

The initial burden is on the examiner to provide some suggestion of the desirability of doing what the inventor has done. "To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985). See MPEP § 2144 - § 2144.09 for examples of reasoning supporting obviousness rejections.

Regarding the teaching or suggestion of all claimed limitations, the references relied upon by the examiner in the rejection of record, taken together, teach or suggest all the claim limitations. In general, the **Flanagan et al.** reference teaches the claim limitations regarding the specific

architecture of the file system, such as the spiral track, and the fact that records in the system sector identify the size and location of the corresponding file system object. The **Mikamo** reference teaches the claimed limitations related to the emulation of a read-write file system on a write-once media (e.g., a WORM), such as the fact that when a file is changed, an updated system sector is written, identifying only those files which have actually been updated, thus conserving file space on the media.

Regarding motivation, the examiner believes that there is ample motivation to combine the references. **Flanagan et al.** teaches a system defining the file system architecture of a write-once optical disk. **Mikamo** teaches an advantageous method of storing updated files on a write-once media wherein an updated system sector is written, identifying only those files that have actually been changed, thus preserving space on the media (see col. 1, lines 8-27 and col. 3, lines 22-25). The **Mikamo** reference seeks to address the exact problem being addressed by the instant invention, and provides the advantage of allowing updating of files on a write-once media while at the same time minimizing the amount of space taken up when updated system sectors are written in response to file updates, in that only changed files are identified by the updated system sector. One of ordinary skill in the art at the time of the invention would have had ample motivation to incorporate this feature into the write-once file system taught by **Flanagan et al.**

Regarding a reasonable expectation of success, an ordinary artisan would have had a reasonable expectation of success in combining the teachings of the two references of record at the time of the invention.

The Appellants argue that the references are fundamentally opposed to each other, because **Mikamo** teaches a system wherein the "system sector" does not contain the location and size of the corresponding file system object.

Initially the examiner points out that both references teach implementations of a file system architecture for a write-once media, and as such the references are not 'fundamentally opposed' to each other. The differences between the references concerns the specific layout of the system sectors of the file system.

Flanagan et al. teaches a system wherein the system sector contains the information claimed by the Appellants, that is, the location and size of the corresponding file system object (col. 7, lines 50-62, and col. 11, line 49 through col. 12, line 62, particularly col. 12, lines 27-35). In the file system of **Mikamo**, the 'system sector' comprises a directory section containing a reference to a record in the data section, said record containing references to the locations of specific records making up the updated file.

However, the **Mikamo** reference is relied upon for its teaching that an updated system sector which identifies only those files that have been updated is written to the write-once media, for the purpose of preserving space on the media. One of ordinary skill in the art at the time of the invention would have had a reasonable expectation of success in applying this advantageous method of processing updated files to the file system architecture disclosed by the **Flanagan et al.** reference.

Furthermore, a file system is a software-implemented method of managing the storage of files on a media. As such, the modification of the file system taught by **Flanagan et al.** to implement the advantageous features taught by the **Mikamo** reference would merely involve making the appropriate changes to the file system software, such changes being well within the capabilities of an ordinary artisan in the file system art. Thus, such an ordinary artisan would

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certainly have had a reasonable expectation of success in combining the teachings of the two references.

For the reasons set forth above, the examiner believes that a *prima facie* case of obviousness has been established.

In response to the Appellants' argument that the **Mikamo** reference fails to teach the limitation that the system sector contains information including the size and location of the corresponding file system object, and also that the system sector data is segregated from the data files, the examiner respectfully responds that in the rejection of record, the **Flanagan et al.** reference is relied upon to teach these features.

One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In response to the Appellant's argument that there would have been no motivation to combine the references of record, the examiner respectfully disagrees.

It must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In this case, both references teach a file system architecture for use in managing a write-once media. The **Mikamo** reference teaches the advantages of a specific method of updating files on such a file system, wherein an updated system sector is generated when a file is updated, but said system segment identifies only those files that have actually changed, thus preserving space on the media. As a write-once media, space cannot be recovered or overwritten, and so preservation of such space is of paramount importance.

The fact that the references teach distinct architectures for the file system does not preclude the combination of the references. It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the method of updating files on the write-once media whereby an updated system sector identifying only those files that have changed is generated, since such a system would preserve space on the media, space which is not recoverable and thus at a premium. The teachings included in the **Mikamo** reference would have supplied an ordinary artisan with sufficient information to allow an implementation of such a system for updating files in the file system taught by the **Flanagan et al.** reference.

For these reasons, the Examiner maintains that the rejection of the claims 2-9, 20 and 24-26 is proper, and should be sustained.

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Conclusion

Claims 2-9, 20 and 24-26 are properly rejected under 35 U.S.C. § 103(a).

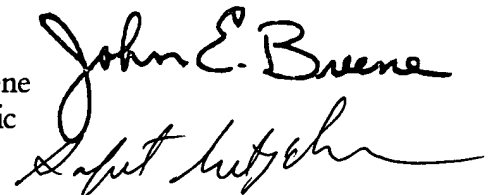
In light of the foregoing arguments, the Examiner respectfully requests the Honorable Board of Appeals to sustain the rejections.

Respectfully submitted,



Luke S. Wassum
Primary Examiner
Art Unit 2167

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April 1, 2005

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